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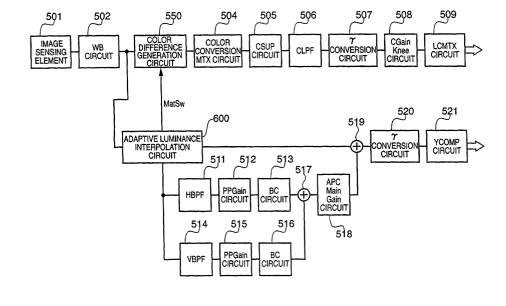
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(54) Signal processing apparatus and method

(57) A signal process for interpolating color signals is executed. In this process, color image data output from image sensing means covered by a plurality of color filters that form a predetermined matrix is interpolated, horizontal and vertical correlation levels are discriminated on the basis of the color image data, first color difference signals are calculated by color-separating interpolated image data of respective colors in a di-

rection with the higher correlation level on the basis of the discrimination result, and second color difference signals are calculated by a predetermined arithmetic operation different from first color difference signal calculation means on the basis of the interpolated image data of respective colors. The calculated first or second color difference signals are selected and output based on the first and second color difference signals.

FIG. 1





EUROPEAN SEARCH REPORT

Application Number EP 02 00 7152

Category	Citation of document with indicat of relevant passages	ion, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
X	PATENT ABSTRACTS OF JA vol. 1999, no. 13, 30 November 1999 (1999 & JP 11 220742 A (SONY 10 August 1999 (1999-0 * abstract *	-11-30) CORP),	1,10,19	H04N9/64	
L	-& US 6 611 287 B1 (NA 26 August 2003 (2003-0 * column 18, lines 47-	8-26)			
X	PATENT ABSTRACTS OF JA vol. 1999, no. 13, 30 November 1999 (1999 & JP 11 220749 A (SONY 10 August 1999 (1999-0 * abstract; figures 2,	7-11-30) CORP), 8-10)	1,10,19		
				TECHNICAL FIELDS SEARCHED (Int.Cl.7)	
				H04N	
	The present search report has been				
	Place of search The Hague	Date of completion of the search 9 August 2004	Wah	ba, A	
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background		E : earlier patent d after the filing d D : document cited L : document cited	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons		

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EP 02 00 7152

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09-08-2004

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 11220742	A	10-08-1999	US US US US US US		A1 A1 A1 A1	26-08-20 03-06-20 03-06-20 20-05-20 20-05-20
US 6611287	B1	26-08-2003	JP US US US US	11220742 2004105013 2004105014 2004095486 2004095475 2004095476	A1 A1 A1 A1	10-08-19 03-06-20 03-06-20 20-05-20 20-05-20 20-05-20
JP 11220749	Α	10-08-1999	NONE	·		

For more details about this annex: see Official Journal of the European Patent Office, No. 12/82